

ABSTRACT

An apparatus for inducing a modification of the index of refraction of a substrate sensitive to electromagnetic radiation. The apparatus is capable of generating a first beam of electromagnetic radiation and a second beam of electromagnetic radiation that is different from the first beam. The first and the second beams converge toward a treatment area on the substrate, which is illuminated with electromagnetic radiation. The first beam and the second beam interact to create an interference pattern over a limited portion of the treatment area.